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EXAMINER	
LU, TOM Y	

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2621	2

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/668,974	Applicant(s) HELMAN, DANIEL RICHARD	
	Examiner Tom Y Lu	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1-3, 6-7 and 30 are objected to because of the following informalities:

   a. Claim 1 contains a typographical error of "*the the* one frame".

   b. Claim 2 contains a typographical error of "a levels".

   c. Claim 3 contains a grammatical error of "wherein the first range of quantization levels *has levels greater levels of* the second range of quantization levels".

   d. Claim 6 contains same typographical error as described in Claim 2.

   e. Claim 7 contains same typographical error as described in Claim 2.

   f. Claim 30 contains same typographical error as described in Claim 3.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1-26 and 28-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Maeda (U.S. Publication No. 2003/0147462 A1).

   a. Referring to Claim 1, Maeda discloses encoding with one or more quantization levels in a first range of quantization levels selected blocks of one frames in the sequence (Maeda at page 3, paragraph [0068] teaches the background image of an

image frame is encoded with relatively fine quantization steps, and such background image is obtained through extracting pixels with no motion from an image frame, page 6, paragraph [00103]. Note an image frame contains both subjects and background); bypassing encoding of blocks of the one frame not selected for encoding (Maeda discloses only the background blocks are encoded, see figure 8 for background blocks); encoding with one or more quantization levels in a second range of quantization levels in another frame that follows the one frame, blocks that correspond to blocks bypassed for encoding in the one frame (Maeda in figure 12, teaches the subject of in another frame is extract and separately encoded. Also see figure 10); and bypassing encoding of blocks of the other frame that correspond to the selected blocks of the one frame (as shown in figures 9 and 10, only subject image blocks are encoded, the background image blocks are bypassed).

b. Referring to Claim 2, Maeda discloses wherein the selected blocks in the one frame include blocks having a level of change that exceed a selected threshold (page 4, paragraph [0071]).

c. Referring to Claim 3, Maeda discloses wherein the first range of quantization levels is greater than the second range of quantization levels (page 3, paragraph [0068]).

d. Referring to Claim 4, Maeda discloses wherein the data comprises moving picture data, the selected blocks in the one frame include blocks having data representing a picture in which motion is detected, and the blocks of the one frame bypassed

for encoding have data representing a picture in which no motion is detected (Maeda in figure 13, teaches the background blocks are still image with no motion, and subject image blocks contain motion).

e. Referring to Claim 5, Maeda discloses wherein levels in the first range are greater than levels in the second range (page 3, paragraph [0068]).

f. With regard to Claim 6, the only difference between Claim 1 and Claim 6 is Claims 6 calls for additional limitation of "wherein the selected ones of the blocks comprises a first subset blocks", in figure 8, 2 or more blocks are considered to be a macro block, or the background region itself can be considered as a macro block, which comprises sub blocks as shown in figure 8.

g. With regard to Claim 7, all limitations are addressed in Claim 2.

h. With regard to Claim 8, all limitations are addressed in Claim 4.

i. With regard to Claim 9, all limitations are addressed in Claim 5.

j. Referring to Claim 10, Maeda discloses further comprising terminating encoding the sequence of frames with levels of the first range after a predetermined number of frames (the predetermined number of frames is one as shown in figure 9).

k. Referring to Claim 11, Maeda discloses further comprising alternating between encoding a sequence of frames using the first range and bypassing blocks in the sequence of frames, and encoding a frame using the second range and bypassing blocks that do not correspond to the second subset of blocks (Maeda at page 9, paragraph [0155] teaches new background image is inserted when the camera

points to a different direction. As a result a new sequence as shown in figure 9 will start again, and the alternation beings).

l. Referring to Claim 12, Maeda discloses further comprising terminating encoding the sequence of frames using the first range after a predetermined period of time (as shown in figure 1, there is one background image encoded, and the standard display rate is 30 frames per second, therefore, the predetermined period of time herein is 1/30 second).

m. With regard to Claim 13, see explanation in Claim 11.

n. Referring to Claim 14, Maeda discloses counting bits output in encoding the sequence of frames using the first range as a total number of bits; terminating the sequence of frames encoded using the first range after the total number of bits exceeds a predetermined threshold (the number of background pixels in background image is to be considered as the predetermined threshold. After all background pixels in the background image are encoded, the encoding process is terminated).

o. With regard to Claim 15, see explanation in Claim 11.

p. Referring to Claim 16, Maeda discloses encoding selected ones of the blocks in a sequence of frames at a first range of quality levels, wherein the selected ones of the blocks comprises a first subset of blocks; bypassing encoding of blocks are not members of the first subset of blocks, wherein the blocks bypassed in encoding comprise a second subset of blocks; encoding at a second range of quality levels in a frame that follows the sequence of frames, blocks that

correspond to the second subset of blocks; and bypassing encoding of blocks of the frame that follows the sequence of frames that do not correspond to the second subset of blocks (Maeda at page 9, paragraph [0155] teaches the new background image can be inserted in the middle of sequence when the camera points at a different direction. The subject first, second and (Ts x F) frames are the claimed "a sequence of frames at a first range of quality levels", and the newly inserted background image is considered to be the claimed "a frame that follows the sequence of frames". Also, see explanation in Claims 1 and 6).

q. With regard to Claim 17, see explanation in Claim 3.

r. With regard to Claim 18, see explanation in Claim 2.

s. With regard to Claim 19, see explanation in Claim 4.

t. With regard to Claim 20, all limitations are addressed in Claim 6.

u. Referring to Claim 21, Maeda discloses a memory arranged to store input frames segmented into blocks (background memory 105 and frame memory 107 in figure 12); an encoder coupled to the memory, configured and arranged to selectably encode blocks from the memory at a selectable quality level, decode encoded blocks, and store decoded blocks (still image encoding unit 106 and moving image encoding unit 110); a motion search element coupled to the memory and to the encoding circuit, the motion search element configured and arranged to detect image motion in input blocks relative to corresponding ones of the decoded, stored blocks (subject extracting unit 108); and an encoding controller coupled to the motion search element and to the encoding circuit, the encoding controller

configured and arranged to select between two or more quality levels for encoding blocks having moving image data and blocks having still image data, and bypass encoding of selected blocks for each of the quality levels (code length control unit 111 and code synthesization unit 112, also see explanation in Claim 1).

v. With regard to Claim 22, all limitations are addressed in Claim 2.

w. With regard to Claim 23, all limitations are addressed in Claim 4.

x. With regard to Claim 24, all limitations are addressed in Claim 10.

y. With regard to Claim 25, all limitations are addressed in Claim 12.

z. With regard to Claim 26, all limitations are addressed in Claim 14.

aa. With regard to Claim 28, all limitations are addressed in Claim 1.

bb. With regard to Claim 29, all limitations are addressed in Claim 2.

cc. With regard to Claim 30, all limitations are addressed in Claim 3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda. All the arguments and applicability in Claim 21 are incorporated herein. Maeda discloses wherein the encoding controller and motion search element are implemented with a CPU (page 12, paragraph [0192]). Maeda does not explicitly point out the CPU and the communication interface 208 in figure 13 is a RISC and DSP processor arrangement. It would have been an obvious matter of

design choice to use RISC and DSP processor arrangement because the advantage of RISC processor in general is parallel processing, and the advantage of DSP in general is utilizing CPU for fax/modem processing. And it appears any standard CPU processor and communication interface would be capable of implementing image compression and transmitting signal through a communication interface. The arrangement of RISC and DSP processor in the present system does not post any significant advantage to video compression, and the CPU processor and communication interface in Maeda would perform equally well.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Murashita et al, U.S. Patent No. 5,485,213, see columns 7-8 and figure 8.

b. Owada et al, U.S. Patent No. 5,040,060, see column 3.

c. Chen et al, U.S. Patent No. 6,208,693B1, see columns 2 and 3.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y Lu whose telephone number is (703) 306-4057. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Y. Lu

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